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THE SECRETARY OF DEFENSE
WASHINGTON
29 MAY 1965

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MEMORANDUM FOR MR. BILL MOYERS, SPECIAL ASSISTANT TO THE
PRESIDENT, THE WHITE HOUSE

SUBJECT: Comments on Need for Space Rescue

With regard to Dr. Welsh's memorandum of 21 May 1965, we are familiar with several proposals by industry for developing separate space rescue systems. Our view of this subject is the following:

1. If we go ahead with MOL, we will provide crew safety features beyond those possible in the earlier manned spaceflight programs. For example, the primary mission being performed in the laboratory vehicle will always be backed up by the return capsule as a lifeboat. In the unlikely event that the laboratory has a major failure, the crew can move to the return capsule, separate from the laboratory, and then wait up to six hours in orbit before selecting a preferred deorbit and landing sequence. In addition, we will employ the same practices that have been employed in Gemini and Apollo concerning design redundancies, extensive qualification testing of parts, and full attention to astronaut abort modes for every phase of the flight.

2. It would appear that any genuine rescue service separate from the basic flight hardware would be useful only if it could be sustained on hold for quick launch throughout the manned program; could be capable of rendezvous and docking under uncertain conditions; and could be assured of higher reliability than the orbiting vehicle requiring help. These essential techniques are among the most important objectives of the Gemini, Apollo and MOL programs. Until they are demonstrated, a separate program for space rescue could not proceed with reasonable and genuine objectives.

3. It is possible we may strand an astronaut in orbit some day. It is very likely that astronauts will be killed, though stranding them is one of the less likely ways. The nation must expect such a loss of life in the space program. There have been several deaths already in our rocket development. We would be untruthful if we were to present any different image to our citizens.

4. As the manned space program evolves to a capability and rate of operation which might warrant a separate rescue arrangement, I expect the Department of Defense to play a large role in the regular operation,

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and correspondingly to participate in any operations to rescue from stranded spacecraft, should a decision be made that they are justified. For the time being, we consider space rescue similar to commercial aircraft or commercial ocean traffic rescue. In these cases every realistic precaution is taken to reduce probabilities of catastrophic failure, and to insure that effective rescue forces are available to retrieve passengers should a major failure occur. The extensive ship and aircraft rescue forces which we deploy globally for each manned flight now typifies this practice.

I would point out that

rescue can take place only to about 400 feet. As a result, a disabling accident in the rather small part of the ocean where the bottom is between 400 feet deep would result in a similar "stranding."

I see no advantage for a specific study of the space rescue question at this time. However, I wish to assure you that the matter of crew safety will remain paramount in our manned military space program. In view of the higher public attention to manned spaceflight, I would note that we will continue to provide this program significantly more crew safety precautions than we have in our similarly dangerous aircraft testing programs.

Cyrus Vance